

Claims

- [c1] A signal transmitting/receiving apparatus, comprising:
- a transmitting device for transmitting a first data and a second data;
 - a receiving device for receiving the first data and the second data;
 - a data line for transmitting the first data and the second data;
- wherein the transmitting device and the receiving device are connected to each other through the data line,
- the transmitting device comprising:
- a driver circuit for outputting the first data to the data line; and
 - a circuit for outputting the second data to the data line,
- the receiving device comprising:
- a terminating resistor connected to the data line;
 - a receiver circuit for detecting the first data from the data line; and
 - a bias generating means for generating a bias voltage applied to the terminating resistor,
- the bias generating means setting the bias voltage based on the second data from the data line.

- [c2] A signal transmitting/receiving apparatus according to claim 1, wherein the bias generating means comprises a bias generating circuit and a reference voltage generating circuit.
- [c3] A signal transmitting/receiving apparatus according to claim 1, wherein the data line for transmitting the first data and the data line for transmitting the second data are different.
- [c4] A signal transmitting/receiving apparatus according to claim 1, wherein the data line comprises a pair of differential lines.
- [c5] A signal transmitting/receiving apparatus according to claim 3, wherein the data line for transmitting the first data comprises a pair of differential lines.
- [c6] A signal transmitting/receiving apparatus according to claim 4, wherein the terminating resistor is connected so as to short circuit between the pair of differential lines, and the bias voltage is applied at substantially a midpoint of the terminating resistor.
- [c7] A signal transmitting/receiving apparatus according to claim 5, wherein the terminating resistor is connected so as to short circuit between the pair of differential lines, and the bias voltage is applied at substantially a mid-

point of the terminating resistor.

- [c8] A signal transmitting/receiving apparatus according to claim 1, further comprising a ground interconnect line for connecting a ground of the transmitting device and a ground of the receiving device.
- [c9] A signal transmitting/receiving apparatus according to claim 1, wherein the data line has flexibility.
- [c10] A signal transmitting/receiving apparatus according to claim 8, wherein the ground interconnect line has flexibility.
- [c11] A transmitting device connected to a data line which transmits the first data and the second data to a receiving device, wherein:
 - the receiving device comprises:
 - a terminating resistor connected to the data line;
 - a receiver circuit for detecting the first data from the data line; and
 - a bias generating means for generating a bias voltage to be applied to the terminating resistor based on the second data from the data line,
 - the transmitting device comprising:
 - a driver circuit for outputting the first data to the data line; and

a circuit for outputting the second data to the data line.

[c12] A transmitting device according to claim 11, wherein the bias generating means comprises a bias generating circuit and a reference voltage generating circuit.

[c13] A transmitting device according to claim 11, wherein the data line for transmitting the first data and the data line for transmitting the second data are different.

[c14] A transmitting device according to claim 11, further connected to a ground interconnect line for transmitting a ground potential of the transmitting device to the receiving device.

[c15] A transmitting device according to claim 11, wherein the data line comprises a pair of differential lines, and the terminating resistor is connected so as to short circuit between the pair of differential lines, whereby the bias voltage is applied at substantially a midpoint of the terminating resistor.

[c16] A receiving device connected to a data line which transmit first data and second data for receiving the first data and the second data from a transmitting device, the transmitting device comprising:
a driver circuit for outputting the first data to the data line; and

a circuit for outputting the second data to the data line, the receiving device comprising:
a terminating resistor connected to the data line;
a receiver circuit for detecting the data from the data line; and
a bias generating means for generating a bias voltage and outputting the bias voltage to the terminating resistor,
wherein the bias generating means sets the bias voltage based on the second data from the data line.

[c17] A receiving device according to claim 16, wherein the bias generating means comprises a bias generating circuit and a reference voltage generating circuit.

[c18] A receiving device according to claim 16, wherein the data line for transmitting the first data and the data line for transmitting the second data are different.

[c19] A receiving device according to claim 16, wherein:
the data line comprises a pair of differential lines;
the terminating resistor short circuits between the pair of differential lines; and
the bias voltage is applied at substantially a midpoint of the terminating resistor.

[c20] A receiving device according to claim 16, further con-

nected to a ground interconnect line which transmits a ground potential of the transmitting device.

- [c21] A signal transmitting/receiving apparatus, comprising:
a transmitting device for transmitting a plurality of first data and at least one second data;
a receiving device for receiving the plurality of first data and the at least one second data; and
a plurality of data lines for transmitting the plurality of first data and the at least one second data,
wherein the transmitting device and the receiving device are connected to each other through the plurality of data lines,
the transmitting device comprising:
a plurality of driver circuits for outputting the plurality of first data to the plurality of corresponding data lines, respectively; and
at least one circuit for outputting the at least one second data to the plurality of data lines,
the receiving device comprising:
a plurality of terminating resistors connected to the plurality of corresponding data lines, respectively; and
a plurality of receiver circuits for detecting the plurality of first data from the plurality of data lines, respectively,
at least one bias generating means for generating a bias voltage to be applied to the plurality of terminating re-

sistors,
the at least one bias generating means setting the bias voltage based on the at least one second data from the plurality of data lines.

[c22] A signal transmitting/receiving apparatus according to claim 21, wherein at least one of the plurality of terminating resistors and the at least one bias generating means are connected through an electric resistance.

[c23] A signal transmitting/receiving apparatus according to claim 21, wherein at least one of the plurality of terminating resistors and the at least one bias generating means are connected through an amplifier.